

To: Green, Holly[Green.Holly@epa.gov]
Cc: Bergman, Ronald[Bergman.Ronald@epa.gov]; Albright, David[Albright.David@epa.gov]; Mordick, Briana[bmordick@nrdc.org]
From: Peridas, George
Sent: Mon 6/1/2015 3:22:04 AM
Subject: Re: CA aquifer exemption discussion

Hi Holly, just got back and catching up on emails. Yes, we can still talk.

As you will know already, DOGGR on CA is planning to bring several wells in compliance by applying for new exemptions. We want to go through the procedure with you (which is dependent on TDS), the data that may be used, and also discuss in more detail the implications of these exemptions being granted or denied.

Thank you again for making time for us.

On May 29, 2015, at 2:26 PM, Green, Holly <Green.Holly@epa.gov<mailto:Green.Holly@epa.gov>> wrote:

Hi George,

Just want to make sure you saw my message about the meeting time change and confirm that we are still on for Monday. Any info or questions you can share in advance would help facilitate the conversation.

Thanks,
Holly

Holly Sage Green
Acting Branch Chief, Prevention
Drinking Water Protection Division
USEPA
(202) 566-0651

Begin forwarded message:

From: "Green, Holly" <Green.Holly@epa.gov<mailto:Green.Holly@epa.gov>>
Date: May 26, 2015 at 5:35:16 PM EDT
To: "Peridas, George" <gperidas@nrdc.org<mailto:gperidas@nrdc.org>>
Subject: Re: CA aquifer exemption discussion

Hi George,

Region 9 now has a conflict. Is 11:30 eastern on June 1 ok?

Thanks,
Holly

Holly Sage Green
Acting Branch Chief, Prevention
Drinking Water Protection Division
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(202) 566-0651

On May 26, 2015, at 4:38 PM, Green, Holly <Green.Holly@epa.gov<mailto:Green.Holly@epa.gov>> wrote:

Great, I just sent an invitation to hold the time. I assume you will be calling in? There is a call-in # on the invite.

Any questions you can provide in advance will help facilitate the conversation.

Thanks, and look forward to speaking with you.

Holly

Holly Sage Green
Acting Chief, Prevention Branch
EPA Office of Ground Water and Drinking Water
1200 Pennsylvania Ave. NW, Washington, DC 20460
(202) 566-0651

From: Peridas, George [mailto:gperidas@nrdc.org]
Sent: Saturday, May 23, 2015 1:04 AM
To: Green, Holly
Subject: RE: CA aquifer exemption discussion

Hi Holly, and many thanks for getting back in touch.

Jun1 2:30-3:30 ET would be best. Many thanks, and looking forward to talking.

Enjoy the long weekend!
GP

GEORGE PERIDAS, PH.D.
Senior Scientist
Deputy Director, Science Center

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From: Green, Holly [mailto:Green.Holly@epa.gov]
Sent: Friday, May 22, 2015 9:40 AM
To: Peridas, George
Subject: CA aquifer exemption discussion

Hi George,

Bruce and Molly let me know you were interested in speaking with EPA about issues in CA around aquifer exemptions. I can set up a call with the UIC program and R9; you are welcome to call in or come in person. We could do Thursday 11-12 or between 1 and 3pm; or the following Monday, June 1 between 11 and 1pm or 2:30-3:30.

Thanks,
Holly

Holly Sage Green
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EPA Office of Ground Water and Drinking Water
1200 Pennsylvania Ave. NW, Washington, DC 20460
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From: Kobelski, Bruce
Sent: Friday, May 22, 2015 9:24 AM
To: Peridas, George; Bayer, MaryRose; Mordick, Briana
Cc: McWhirter, Lisa; Albright, David
Subject: Re: EPA Memo on UIC Class VI Rule

George- I'm going to see if we can get you some additional response by passing this along to Lisa McWhirter who is now the point of contact for the CA aquifer exemption issue (if I'm mistaken, I apologize, Lisa). And of course, you can reach David Albright in Region 9 on this issue.

Molly passed your request along to Holly, who as you might imagine has been fielding many Prevention Branch issues related to the UIC and Source Water programs. But I trust they can provide some answers to you and/or confer with Holly if necessary. Sorry about the delay and have a nice Memorial Day weekend.

Bruce Kobelski, Geologist

UIC Program

USEPA OGWDW

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From: Peridas, George <gperidas@nrdc.orgmailto:gperidas@nrdc.org>>
Sent: Thursday, May 21, 2015 5:43 PM
To: Bayer, MaryRose; Mordick, Briana
Cc: Kobelski, Bruce
Subject: RE: EPA Memo on UIC Class VI Rule

Hi again, Molly.

No response yet, so I am getting back in touch!

Thanks again.

GP

From: Bayer, MaryRose [mailto:Bayer.MaryRose@epa.gov]
Sent: Wednesday, May 13, 2015 6:34 AM
To: Peridas, George; Mordick, Briana
Cc: Kobelski, Bruce
Subject: RE: EPA Memo on UIC Class VI Rule

George and Briana,

Thanks for the follow-up. I have passed along your inquiry to my management (i.e., Holly Green, our Acting Branch Chief) given that I am not actively involved in the CA AE issue. She would be able to connect you to the right people both in DC and in Region 9. If you don't hear from her by sometime next week, please feel free to get back in touch with me and/or Bruce and we'll gently remind her of your inquiry.

Regards,

Molly

From: Peridas, George [mailto:gperidas@nrdc.org]
Sent: Tuesday, May 12, 2015 4:43 PM
To: Mordick, Briana; Kobelski, Bruce; Bayer, MaryRose
Subject: RE: EPA Memo on UIC Class VI Rule

Molly, Bruce,

On another topic, I don't know if you have followed the situation with aquifer exemptions in CA and DOGGR's plans to bring hundreds of wells into compliance (that have been injecting into non-exempt aquifers) by requesting new exemptions.

In any case, we would like to talk to you about it, and also to any Region 9 folks whom you think might be relevant. Do you have any time this week?

Many thanks,

GP

From: Mordick, Briana
Sent: Wednesday, May 06, 2015 4:59 PM
To: Kobelski, Bruce; Peridas, George; Bayer, MaryRose
Subject: RE: EPA Memo on UIC Class VI Rule

Good to hear from you guys too, it's been a while since we've caught up.

From: Kobelski, Bruce [mailto:Kobelski.Bruce@epa.gov]
Sent: Wednesday, May 06, 2015 6:15 AM
To: Peridas, George; Bayer, MaryRose; Mordick, Briana
Subject: RE: EPA Memo on UIC Class VI Rule

Good to hear from you both, George and Briana.

From: Peridas, George [mailto:gperidas@nrdc.org]
Sent: Tuesday, May 05, 2015 7:06 PM
To: Bayer, MaryRose; Mordick, Briana
Cc: Bergman, Ronald; Kumar, Chitra; Kobelski, Bruce; Kelly, Suzanne; McWhirter, Lisa
Subject: RE: EPA Memo on UIC Class VI Rule

Thank you, Molly. Please alert us to any public comment opportunities in relation to the ND application, or others that may arise.

From: Bayer, MaryRose [mailto:Bayer.MaryRose@epa.gov]
Sent: Tuesday, May 05, 2015 2:05 PM
To: Peridas, George; Mordick, Briana
Cc: Bergman, Ronald; Kumar, Chitra; Kobelski, Bruce; Kelly, Suzanne; McWhirter, Lisa
Subject: RE: EPA Memo on UIC Class VI Rule

George,

Currently, the only formal application in process (working its way through reviews at EPA) is the one for North Dakota.

We've been in discussions with and/or have reviewed draft regulations (against the Class VI requirements) for Kansas, Wyoming, Louisiana and Mississippi; but, to date, no primacy applications (i.e., with all of the critical components) have been formally submitted from any of these or other states. Additionally, we've heard from some states (e.g., Kansas) that they are not currently interested in advancing the process.

Regards,

Molly

From: Peridas, George [mailto:gperidas@nrdc.org]
Sent: Tuesday, May 05, 2015 4:02 PM
To: Mordick, Briana; Bayer, MaryRose
Cc: Bergman, Ronald; Kumar, Chitra; Kobelski, Bruce; Kelly, Suzanne
Subject: RE: EPA Memo on UIC Class VI Rule

Adding my thanks, Molly. In relation to the last item in the memo, could you please update us on where things stand with state primacy applications for Class VI?

GP

From: Mordick, Briana
Sent: Monday, May 04, 2015 3:49 PM
To: Bayer, MaryRose; Peridas, George
Cc: Bergman, Ronald; Kumar, Chitra; Kobelski, Bruce; Kelly, Suzanne
Subject: RE: EPA Memo on UIC Class VI Rule

Molly,

Thank you for this and sorry for the delay in responding. We are still digesting it and will likely have some questions. As you no doubt figured out, neither of us were able to attend the CCUS meeting this year, unfortunately.

Also, thought you might be interested in the below take on it, ICYMI.

Best,

Briana

9 of 11 DOCUMENTS

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May 1, 2015

LENGTH: 1009 words

HEADLINE: EPA DROPS PLAN SUBJECTING EOR TO CCS PERMITS FOLLOWING CRITICS' CAUTION

BODY:

U.S. EPA has dropped a controversial plan that would have subjected enhanced oil recovery (EOR) wells to strict permits intended for carbon capture and sequestration (CCS) operations rather than more relaxed permits for oil and gas operations, following industry warnings that the plan would have stymied the sector that is expected to provide a major market for carbon dioxide (CO₂) emissions from industrial sources.

Peter Grevatt, director of the Office of Groundwater and Drinking Water, signed an April 24 memo that largely drops plans to require existing EOR wells to transition from their current Class II underground injection control (UIC) permits for oil and gas operations to stricter Class VI permits for CCS, declaring in part that CO₂ can be safely stored under existing Class II permits.

Among other things, the memo concludes that EOR operations can switch from using a natural source to an anthropogenic source of CO₂ without triggering the need to upgrade to a stricter Class VI permit under the Safe Drinking Water Act (SDWA) program. The memo is available on InsideEPA.com<<http://InsideEPA.com>>. See page 3 for details (Doc. ID: 181020)

But the memo, sent to the agency's regional water division directors, leaves the door open to consider some EOR wells for Class VI permits in cases where the Class II rules may not provide regulators with adequate tools to protect against "increased risks" to underground sources of drinking water (USDWs) from "significant storage of CO₂ in the reservoir."

The most direct indicator of increased risk to USDW "is increased pressure in the injection zone related to

the significant change of CO₂," the memo says. "Increases in pressure with the potential to impact USDWs should first be addressed using tools within the Class II program. Transition to Class VI should only be considered if the Class II tools are insufficient to manage the increased risk."

The dramatic changes to the EPA guidance follow a wave of industry opposition to a draft guidance EPA issued in 2013 that proposed to transition EOR wells from existing SDWA Class II permits -- which govern a range of oil and gas sector activities -- to novel Class VI wells intended for CCS projects as they sequester increasing amounts of CO₂.

EPA's Class VI program, established in 2010, includes significantly more rigorous site survey requirements, a more comprehensive monitoring program and additional financial responsibilities.

Energy groups raised strong concerns over the previous draft guidance, warning it would make it difficult for the EOR industry -- currently viewed by some as the only form of carbon capture that is commercially viable -- to use CO₂ captured from power plants. That could undermine the agency's claim that CCS is feasible as a means of complying with its proposed rule to curb CO₂ from future utilities.

The agency's more relaxed approach is already winning praise from industry representatives. A California CCS industry source says the EPA memo provides a very welcome "bright line guidance" that has been a "long time in the making."

EPA first released its "Draft Underground Injection Control (UIC) Program On Transitioning Class II Wells to Class VI Wells" guidance in December 2013, and took comment on the document through March 1, 2014.

Major U.S. industry organizations, including the National Mining Association, Edison Electric Institute and American Coalition for Clean Coal Electricity, charged in comments to EPA last year that the previous draft guidance document would prompt EOR operators to halt purchases of CO₂ from utilities if the agency required them to transition from a Class II well permit to a Class VI permit.

As a result, this scenario would have the effect of eliminating CCS as a viable compliance option for utilities trying to comply with EPA's new source performance standards (NSPS) requiring coal power plants to install partial CCS, the organizations argued. Under the NSPS, EPA is proposing a greenhouse gas control standard that would require new plants to install at least partial CCS in order to capture 30 percent of their emissions.

The new guidance memo now states that EOR "wells across the U.S. are currently permitted as UIC Class II wells. CO₂ storage associated with Class II wells is a common occurrence, and CO₂ can be safely stored where injected through Class II-permitted wells for the purpose of oil and gas-related recovery."

EOR operations can continue to be permitted as Class II wells regardless of the source of CO₂, the new guidance states. "An owner or operator of an [EOR] operation can switch from using a natural source to an anthropogenic source of Co₂ without triggering the need for a Class VI permit."

EPA also received push-back on the previous draft guidance from states, whose officials argued that the document may allow the agency to "unlawfully" preempt states' control over EOR wells and force operators to obtain the stricter Class VI permits.

In a 2014 letter from the state attorneys general of Oklahoma, Texas, Wyoming, Alabama, Michigan, Nebraska and South Carolina, the attorneys said the draft guidance created confusion and uncertainty for states with permitting authority to oversee their own Class II programs -- the majority of oil-and gas-producing states.

Many states have delegated authority, known as "primacy," for permitting Class II wells but no state currently has primacy for Class VI wells, for which EPA retains permitting power. Therefore, the attorneys

feared that an EPA regional official could cite the guidance to force a state Class II director to change a well to Class VI.

But EPA's new revised guidance document now states that the "best implementation approach is for states to administer both the Class II and the Class VI UIC programs." EPA "encourages states to apply for primacy for all well classes, including Class VI," the memo says. "Based on our conversations with states, in most cases, states who are approved for primacy for the Class VI program are expected to administer the program through their oil and gas program."

LOAD-DATE: May 1, 2015

From: Bayer, MaryRose [mailto:Bayer.MaryRose@epa.gov]
Sent: Monday, April 27, 2015 9:47 AM
To: Peridas, George; Mordick, Briana
Cc: Bergman, Ronald; Kumar, Chitra; Kobelski, Bruce; Kelly, Suzanne
Subject: EPA Memo on UIC Class VI Rule

George and Briana,

We thought you may be interested in the attached EPA memo, as you had provided comments on EPA's draft guidance on potential transition from Class II wells to Class VI wells under the Underground Injection Control program.

The attached went out on Friday and there were a few email challenges when transmitting it. So, this is a courtesy follow-up to make sure you received a copy. Also, please note that the phone number (for Ron Bergman) in the memo should be: 202-564-3823.

I hope to see one or both of you at the CCUS meeting this week.

Regards,

Molly

Mary Rose Bayer
Geologist, UIC GS Team Leader
U.S. Environmental Protection Agency
Office of Ground Water & Drinking Water: Prevention Branch
Phone: (202) 564-1981

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